The Aerovox Project Operable Unit 3 (OU3) is the source control OU and is comprised of the Aerovox Property soil, storm sewers and overburden groundwater. The remedial goals for this OU3 are to:

- 1. Eliminate or reduce concentrations, to the extent feasible, or control access to areas with soils containing contaminants at concentrations greater than their respective UCLs.
- 2. Eliminate or reduce, to the extent feasible, or control access to soils that present unacceptable risk to human health and/or the environment under current or foreseeable future use.
- 3. Eliminate or reduce, to the extent feasible, or control soil as a potential source of impacts to overburden GW.
- 4. Reduce concentrations, to the extent feasible and control migration of overburden GW impacted by PCBs and/or CVOCs at concentrations that could present a risk to receptors in surface water and sediment after New Bedford Harbor remediation is complete, and achieve a stable or contracting groundwater plume.
- 5. Eliminate, to the extent feasible, and control DNAPL in overburden that may be a source of impacts to overburden GW or that may be non-stable, to the extent such DNAPL control is necessary after completion of the DNAPL IRA.
- 6. Eliminate, to the extent feasible and control the migration of PCB impacted sediments in the Site stormwater system.

	ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3
Parameter	Removal and Off-Site Disposal of Soils Above UCLs, Cap Areas With PCB Concentrations > 2 mg/kg, Overburden Groundwater Containment via Vertical Barrier Wall with Hydraulic Containment, In-Situ Treatment of Plume Hot Spot	Removal and Off-Site Disposal of Soils Above UCLs, Cap Areas With PCB Concentrations > 2 mg/kg, Overburden Groundwater Containment via Vertical Barrier Wall with Hydraulic Containment	Removal and Off-Site Disposal of Soils Within 25-feet of Shoreline above Peat, Within the Northeast Corner down to Bedrock, and Above UCLs, Cap Areas With PCB Concentrations > 2 mg/kg, Partial Containment and Treatment of Groundwater with Permeable Reactive Barrier, In-Situ Treatment of Plume Hot Spot
Size and Configuration	This alternative includes: excavate and off-site dispose of soils in the top 15 feet below ground surface (bgs) with concentrations above UCLs, backfill and restore asphalt cap in areas where needed, clean and line to the extent practicable or replace sections of storm sewer that serve as a preferential migration pathway, finalize the AUL to restrict current and foreseeable future use and provide for long term operation and maintenance of the cap, install a vertical containment and groundwater extraction and treatment system to prevent lateral and/or vertical migration of CVOCs and PCBs outside the containment area, and provide in situ treatment of deeper hot spot soils containing concentrations of PCBs and CVOCs that may be acting as a source to overburden groundwater contamination. Both in-situ treatment and groundwater extraction and treatment would reduce concentrations of	This alternative includes: excavate and off-site dispose of soils with concentrations above UCLs in the top 15 feet bgs, backfill and restore asphalt cap in areas where needed, clean and line to the extent practicable or replace sections of storm sewer that serve as a preferential migration pathway, finalize the AUL to restrict current and foreseeable future use and provide for long term operation and maintenance of the cap, install a vertical containment barrier and groundwater extraction and treatment system to prevent lateral and/or vertical migration of CVOCs and PCBs outside the containment area and to reduce concentrations of CVOCs and PCBs within the containment area.  Excavation would occur in the footprint areas shown on Figure 4-1A. Excavation would be undertaken to depths up to 15 feet bgs across areas where soils are impacted by contaminants at concentrations in excess of their respective UCLs. These	This alternative includes: excavate and off-site dispose of soils with concentrations above UCLs in the top 15 feet bgs, soils within 25-feet of the shoreline down to the top of the peat layer, and soils within the northeast corner of the site down to the top of bedrock; install a vertical containment barrier on the northern and southern sides of the impacted area, install a permeable reactive barrier to treat CVOCs and PCBs in overburden groundwater along the downgradient side of the property, backfill excavated areas not within the PRB footprint with clean fill and restore asphalt cap in areas where needed, clean and line to the extent practicable or replace sections of storm sewer that serve as a preferential migration pathway, finalize the AUL to restrict current and foreseeable future use and provide for long term operation and maintenance of the cap, and in situ treatment of soils containing concentrations of PCBs and CVOCs acting as a source to overburden

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CVOCs and PCBs within the containment area.

Excavation would occur in the footprint areas shown on Figure 4-1A. Excavation would be undertaken to depths up to 15 feet bgs across areas where soils are impacted by contaminants at concentrations in excess of their respective UCLs. These areas and corresponding depths are also shown on Figure 4-1A. Soil excavation would be required above and below the peat layer and beneath portions of the former building slab. Soils would be segregated based on concentration with those containing contaminant concentrations below their respective UCLs returned to the excavation. This alternative would include the excavation of approximately 26,600 cubic yards of soil with subsequent transportation and off site disposal at an approved facility. The excavated areas would be backfilled with clean soil (after excavated soils with concentrations below UCLs have been redeposited). Soils with contaminants at concentrations above their respective UCLs would be disposal of off-site. The asphalt cap would be restored where residual PCB contamination at any depth exceeds 2 mg/kg.

Existing storm sewers would be repaired, cleaned and lined wherever practicable, or sections replaced or reconfigured, as needed. The AUL for the Aerovox property would be finalized to restrict foreseeable future site uses and provide for maintenance of the cap.

Vertical barrier installation would occur along the alignment shown on Figure 4-4B. The type of barrier would be selected from among effective process options including: slurry wall, in situ mixed wall, and sealed sheet piling. Vertical barrier would be installed through the overburden deposits down to bedrock.

Groundwater would be hydraulically contained by pumping (with above ground treatment) from a series of extraction wells within the containment area as shown on Figure 4-5B. A wastewater treatment plant would be constructed on site to manage the water generated by hydraulic containment. In situ treatment would be performed by injecting nutrients, organic carbon, microbes, and zero

areas and corresponding depths are also shown on Figure 4-1A. Soil excavation would be required above and below the peat layer and beneath portions of the former building slab. Soils would be segregated based on concentration with those containing contaminant concentrations below their respective UCLs returned to the excavation. This alternative would include the excavation of approximately 26,600 cubic yards of soil with subsequent transportation and off site disposal at an approved facility. The excavated areas would be backfilled with clean soil (after excavated soils with concentrations below UCLs have been redeposited). Soils with contaminants at concentrations above their respective UCLs would be disposa of off-site. The asphalt cap would be restored where residual PCB contamination at any depth exceeds 2 mg/kg. Existing storm sewers would be repaired, cleaned and lined wherever practicable, or sections replaced or reconfigured, as needed. The AUL for the Aerovox property would be finalized to restrict foreseeable future site uses and provide for maintenance of the cap.

Vertical barrier installation would occur along the alignment shown on Figure 4-4B. The type of barrier would be selected from among effective process options including: slurry wall, in situ mixed wall, and sealed sheet piling. Vertical barrier would be installed through the overburden deposits down to bedrock.

Groundwater would be hydraulically contained by pumping (with above ground treatment) from a series of extraction wells within the containment area as shown on Figure 4-5B. A wastewater treatment plant would be constructed on site to manage the water generated by hydraulic containment. A monitoring program would be included to confirm containment and provide sentinel monitoring outside the area to confirm mitigation of mass flux from the property to the Acushnet River.

groundwater contamination.

Excavation would occur in the footprint areas shown on Figure 4-1A. Excavation would be undertaken to depths corresponding to removal of soils in the top 15 feet impacted by contaminants at concentrations in excess of their respective UCLs, removal of the northeast corner soils down to the bedrock surface; and removal of soils within 25-feet of the shoreline down to the top of peat layer.

Excavation of soils >UCLs would be required above and below the peat layer and beneath portions of the former building slab at UCL areas. Soils outside of the NE corner and 25-foot of shoreline zones would be segregated based on concentration with those containing contaminant concentrations below their respective UCLs returned to the excavation. This alternative would include the excavation of approximately 30,800 cubic yards of soil with subsequent transportation and off site disposal at an approved facility. The excavated areas would be backfilled with clean soil (after excavated soils with concentrations below UCLs have been redeposited). Excavated soils with contaminants at concentrations above their respective UCLs (and all soils from the 25-foot zone and northeast corner down to bedrock) would be disposal of offsite. The asphalt cap would be restored where residual PCB contamination at any depth exceeds 2 mg/kg.

Existing storm sewers would be repaired, cleaned and lined wherever practicable, or sections replaced or reconfigured, as needed. The AUL for the Aerovox property would be finalized to restrict foreseeable future site uses and provide for maintenance of the cap.

A vertical containment barrier would be installed on the northern and southern sides of the impacted area, with a permeable reactive barrier installed within the western portion of the 25-feet of shoreline zone though the overburden deposits down to bedrock to treat CVOCs and PCBs in overburden groundwater along the downgradient side of the property. Vertical barrier installation would occur along the alignment shown on Figure 4-7B. In situ treatment would be performed by injecting nutrients, organic carbon, microbes, and zero valent iron in the area shown on Figure 4-7B. A

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	valent iron (Figure 4-6B). A monitoring program would be included to evaluate the success of groundwater treatment within the hydraulically contained area, confirm containment, and provide sentinel monitoring outside the barrier to confirm mitigation of mass flux from the property to the Acushnet River.		monitoring program would be included to provide sentinel monitoring outside the barrier and to confirm mitigation of mass flux from the property to the Acushnet River.
Remediation Time	Excavation of soils and offsite transportation and disposal, backfilling, and construction of the asphalt cap would take approximately five to seven months.	Excavation of soils and offsite transportation and disposal, backfilling, and construction of the asphalt cap would take approximately five to seven months.	Excavation of soils and offsite transportation and disposal, backfilling, and construction of the asphalt cap would take approximately eight to 10 months.
	Cleaning and lining/replacement of the drainage lines would take approximately one to two months.	Cleaning and lining/replacement of the drainage lines would take approximately one to two months.	Cleaning and lining/replacement of the drainage lines would take approximately one to two months.
	Installation of vertical containment barrier, groundwater extraction wells and above ground treatment system, and insitu treatment system would take approximately six to eight	Installation of vertical containment barrier, groundwater extraction wells and above ground treatment system would take approximately six to eight months.	Installation of containment and permeable reactive barrier and in situ treatment system would take approximately four to five months.
	months.  Operation of the hydraulic containment and treatment system would extend indefinitely (assumed 30 years minimum), or until groundwater achieves GW-3 standards and the barrier walls can be removed.	Operation of the hydraulic containment and treatment system would extend indefinitely (assumed 30 years minimum), or until groundwater achieves GW-3 standards and the barrier walls can be removed.	PRB would function indefinitely and may require periodic replacement of media.
Spatial Requirements	Remedial construction activities could be conducted within the confines of the Site.	Remedial construction activities could be conducted within the confines of the Site.	Remedial construction activities could be conducted within the confines of the Site.
	Excavated soils may be direct loaded for disposal or securely staged within the Aerovox property as needed.  A permanent wastewater treatment plant would be constructed and occupy a portion of the property.	Excavated soils that require off-site disposal may be direct loaded or securely staged within the Aerovox property as needed.  A permanent wastewater treatment plant would be constructed and occupy a portion of the property.	Excavated soils that require off-site disposal may be direct loaded or securely staged within the Aerovox property as needed.



Disposal Options	Excavated soils and debris removed during barrier installation would be transported and disposed off-site at an approved facility.	Excavated soils and debris removed during barrier installation would be transported and disposed off-site at an approved facility.	Excavated soils and debris removed during barrier installation would be transported and disposed off-site at an approved facility.
	Water extracted and/or generated from construction dewatering and groundwater recovered as a result of hydraulic containment would be treated on-site and reinjected or discharged to the river and/or the local POTW.	Water extracted and/or generated from construction dewatering and groundwater recovered as a result of hydraulic containment would be treated on-site and reinjected or discharged to the river and/or the local POTW.	Water extracted and/or generated from construction dewatering would be treated on-site and discharged to the river and/or the local POTW.  In the event that sections of the storm sewer require
	Waste streams produced by the wastewater treatment plant (e.g. spent activated carbon) would be transported and disposed off site.	Waste streams produced by the wastewater treatment plant (e.g. spent activated carbon) would be transported and disposed off site.	jetting/cleaning or replacement, remove materials or sections of the original storm sewer system may require offsite disposal if they cannot be consolidated onsite.
	In the event that sections of the storm sewer require jetting/cleaning or replacement, remove materials or sections of the original storm sewer system may require offsite disposal if they cannot be consolidated onsite.	In the event that sections of the storm sewer require jetting/cleaning or replacement, remove materials or sections of the original storm sewer system may require offsite disposal if they cannot be consolidated onsite.	
Substantive Permit Requirements	Work in the Riverfront Area and Buffer Zone may require permitting under the Wetlands Protection act and local ordinances.	Work in the Riverfront Area and Buffer Zone may require permitting under the Wetlands Protection act and local ordinances.	Work in the Riverfront Area and Buffer Zone may require permitting under the Wetlands Protection act and local ordinances.
	Work within 25 feet of the River would need to be designed to support the City of New Bedford's planned Riverwalk.	Work within 25 feet of the River would need to be designed to support the City of New Bedford's planned Riverwalk.	Work within 25 feet of the River would need to be designed to support the City of New Bedford's planned Riverwalk.
	Water generated from dewatering and possible storm sewer jetting would be treated on-site and discharged to the river and/ or the local POTW (permit required) or transported off site for treatment and disposal.	Water generated from dewatering and storm sewer jetting would be treated on-site and discharged either to the river and/ or the local POTW (permit required) or transported off site for treatment and disposal.	Water generated from dewatering and storm sewer jetting would be treated on-site and discharged either to the river and/ or the local POTW (permit required) or transported off site for treatment and disposal.
	Wastewater generated through hydraulic containment would be treated on site and reinjected or discharged to the river or to the POTW (permit required).	Wastewater generated through hydraulic containment would be treated on site and reinjected or discharged to the river or to the POTW (permit required).	If 1 or more acres of land is disturbed, an EPA Construction General Permit for Stormwater and CSWPPP would be required.
***************************************	If 1 or more acres of land are disturbed, an EPA Construction General Permit for Stormwater and CSWPPP would be required.	If 1 or more acres of land is disturbed, an EPA Construction General Permit for Stormwater and CSWPPP would be required.	Would require prior DEP approval for addition of Remedial Additives (if any) within 50 feet of the Acushnet River.
	Would require prior DEP approval for addition of Remedial Additives (if any) within 50 feet of the Acushnet River.		



	ALTERNATIVE 4	ALTERNATIVE 5	ALTERNATIVE 6
PARAMETER	Removal and Off-Site Disposal of Soils Within 25-feet of Shoreline above Peat and Down to Bedrock Within the Northeast Corner, Engineered Barrier Over Areas with PCBs >100 mg/kg and Asphalt Cap Over Areas with PCBs >2mg/kg, Overburden Groundwater Containment via Vertical Barrier Wall with Hydraulic Containment, In-Situ Treatment of Plume Hot Spot	Removal and Off-Site Disposal of Soils Within 25-feet of Shoreline above Peat and Down to Bedrock Within the Northeast Corner, Engineered Barrier Over Areas with PCBs >100 mg/kg and Asphalt Cap Over Areas with PCBs >2mg/kg, and Overburden Groundwater Containment via Vertical Barrier Wall with Hydraulic Containment	Removal and Off-Site Disposal of Soils Within 25-feet of Shoreline above Peat and Down to Bedrock Within the Northeast Corner, Engineered Barrier Over Areas with PCBs >100 mg/kg and Asphalt Cap Over Areas with PCBs >2mg/kg, Partial Containment and Treatment of Groundwater with Permeable Reactive Barrier, In-Situ Treatment of Plume Hot Spot
Size and Configuration		This alternative includes: excavate and off-site dispose of soils within 25-feet of the shoreline down to the top of the peat layer and within the northeast corner of the site down to the top of bedrock, backfill with clean fill, install an engineered barrier over areas with PCB concentrations in soil above UCLs in the top 15 feet, restore asphalt cap on rest of site areas where needed, clean and line to the extent practicable or replace sections of storm sewer that serve as a preferential migration pathway, finalize the AUL to restrict current and foreseeable future use and provide for long term operation and maintenance of the engineered barrier and cap, install a vertical containment barrier and groundwater extraction and treatment system to prevent lateral and/or vertical migration of CVOCs and PCBs outside the containment area and to reduce concentrations of CVOCs and PCBs within the containment area.  Excavation would be undertaken to the top of the peat (average depth of 9 feet bgs) within 25-feet of the shoreline and to the bedrock surface (average depth of 30 feet bgs) in the northeast corner of OU3. These areas and corresponding depths are also shown on Figure 4-1A. This alternative would include the excavation and off-site disposal of approximately 6,900 cubic yards of soil. An engineered barrier would be constructed where remaining soils less than 15 feet bgs contain PCBs at or greater than 100 mg/kg, and the asphalt cap would be restored where residual PCB concentrations at any depth exceed 2 mg/kg.	This alternative includes: excavate and off-site dispose of soils within 25-feet of the shoreline down to the top of the peat layer and within the northeast corner of the site down to the top of bedrock, backfill with clean fill, engineered barrier over areas with PCB concentrations in soil above UCLs, restore asphalt cap rest of site areas where needed, clean and line to the extent practicable or replace sections of storm sewer that serve as a preferential migration pathway, finalize the AUL to restrict current and foreseeable future use and provide for long term operation and maintenance of the engineered barrier and cap, install a permeable reactive barrier to treat CVOCs and PCBs in overburden groundwater along the downgradient side of the property, with a vertical containment barrier on the northern and southern sides of the impacted area, and in situ treatment of soils containing concentrations of PCBs and CVOCs acting as a source to overburden groundwater contamination.  Excavation would be undertaken to the top of the peat (average depth of 9 feet bgs) within 25-feet of the shoreline and to the bedrock surface (average depth of 30 feet bgs) in the northeast corner of OU3. These areas and corresponding depths are also shown on Figure 4-1A. This alternative would include the excavation and off-site disposal of approximately 7,900 cubic yards of soil. An engineered barrier would be constructed where remaining soils contain PCB concentrations greater than 100 mg/kg, and the asphalt cap would be restored where residual PCB concentrations at any depth exceed 2

engineered barrier would be constructed where remaining soils less than 15 feet bgs contain PCBs at or greater than 100 mg/kg, and the asphalt cap would be restored where residual PCB concentrations at any depth exceed 2 mg/kg.

Existing storm sewers would be repaired, cleaned and lined wherever practicable, or sections replaced or reconfigured, as needed. The AUL for the Aerovox property would be finalized to restrict foreseeable future site uses and provide for maintenance of the cap.

Vertical barrier installation would occur along the alignment shown on Figure 4-4B. The type of barrier would be selected from among effective process options including: slurry wall, in situ mixed wall, and sealed sheet piling. Vertical barrier would be installed through the overburden deposits down to bedrock.

Groundwater would be hydraulically contained by pumping (with above ground treatment) from a series of extraction wells within the containment area as shown on Figure 4-5B A wastewater treatment plant would be constructed on site to manage the water generated by hydraulic containment. In situ treatment would be performed by injecting nutrients, organic carbon, microbes, and zero valent iron (Figure 4-6B). A monitoring program would be included to evaluate the success of groundwater treatment within the hydraulically contained area, confirm containment, and provide sentinel monitoring outside the barrier to confirm mitigation of mass flux from the property to the Acushnet River.

Existing storm sewers would be repaired, cleaned and lined wherever practicable, or sections replaced or reconfigured, as needed. The AUL for the Aerovox property would be finalized to restrict foreseeable future site uses and provide for maintenance of the cap.

Vertical barrier installation would occur along the alignment shown on Figure 4-4B. The type of barrier would be selected from among effective process options including: slurry wall, in situ mixed wall, and sealed sheet piling. Vertical barrier would be installed through the overburden deposits down to bedrock. Groundwater would be hydraulically contained by pumping (with above ground treatment) from a series of extraction wells within the containment area as shown on Figure 4-5B. A wastewater treatment plant would be constructed on site to manage the water generated by hydraulic containment. A monitoring program would be included to confirm containment and provide sentinel monitoring outside the area to confirm mitigation of mass flux from the property to the Acushnet River.

mg/kg. Existing storm sewers would be repaired, cleaned and lined wherever possible, or sections replaced or reconfigured, as needed. The AUL for the Aerovox property would be finalized to restrict foreseeable future site uses and provide for maintenance of the cap.

A vertical containment barrier would be installed on the northern and southern sides of the impacted area, with a permeable reactive barrier installed within the western edge of the 25-feet of the shoreline to treat CVOCs and PCBs in overburden groundwater along the downgradient side of the property. The two types of barriers would be along the alignment shown on Figure 4-7B). The permeable reactive barrier would be installed though the overburden deposits down to bedrock to treat overburden groundwater. In situ treatment would be performed by injecting nutrients, organic carbon, microbes, and zero valent iron in the area shown on Figure 4-7B. A monitoring program would be included to provide sentinel monitoring outside the barrier and to confirm mitigation of mass flux from the property to the Acushnet River.



#### Remediation Time

Excavation of soils and off-site transportation and disposal, backfilling, and capping (engineered barrier and asphalt) would take approximately three to four months.

Cleaning and lining/replacement of the drainage lines would take approximately one to two months.

Installation of vertical containment barrier, groundwater extraction wells and above ground treatment system, and insitu treatment system would take approximately six to eight months.

Operation of the hydraulic containment and treatment system would extend indefinitely (assumed 30 years minimum), or until groundwater achieves GW-3 standards Excavation of soils and off-site transportation and disposal. backfilling, and capping (engineered barrier and asphalt) would backfilling, and capping (engineered barrier and asphalt) would take approximately three to four months.

Cleaning and lining/replacement of the drainage lines would take approximately one to two months.

Installation of vertical containment barrier, groundwater extraction wells and above ground treatment system would take approximately five to six months.

Operation of the hydraulic containment and treatment system would extend indefinitely (assumed 30 years minimum), or until replacement of media. groundwater achieves GW-3 standards and the barrier walls can be removed.

Excavation of soils and off-site transportation and disposal, take approximately three to four months.

Cleaning and lining/replacement of the drainage lines would take approximately one to two months.

Installation of containment and permeable reactive barrier and in situ treatment system would take approximately four to five months.

PRB would function indefinitely and may require periodic

	and the barrier walls can be removed.		
Spatial Requirements	Remedial activities could be conducted within the confines of the Site. Excavated soils (if any) may be direct loaded for disposal or securely staged within the Aerovox property as needed.	Remedial activities could be conducted within the confines of the Site. Excavated soils (if any) may be direct loaded for disposal or securely staged within the Aerovox property as needed.	Remedial activities could be conducted within the confines of the Site. Excavated soils (if any) may be direct loaded for disposal or securely staged within the Aerovox property as needed.
	A permanent wastewater treatment plant would be constructed and occupy a portion of the property.	A permanent wastewater treatment plant would be constructed and occupy a portion of the property.	
Disposal Options	Excavated soils would be transported and disposed off-site at an approved facility.  Water extracted and/or generated from construction dewatering would be treated on-site and discharged to the river and/or the local POTW and groundwater recovered as a result of hydraulic containment would be treated on-site and reinjected or discharged to the river and/or the local POTW.  Waste streams produced by the wastewater treatment plant (e.g. spent activated carbon) would be transported and disposed off site.  In the event that sections of the storm sewer require jetting/cleaning or replacement, remove materials or sections of the original storm sewer system may require offsite disposal if they cannot be consolidated onsite.	Excavated soils would be transported and disposed off-site at an approved facility.  Water extracted and/or generated from construction dewatering would be treated on-site and discharged to the river and/or the local POTW. and groundwater recovered as a result of hydraulic containment would be treated on-site and reinjected or discharged to the river and/or the local POTW.  Waste streams produced by the wastewater treatment plant (e.g. spent activated carbon) would be transported and disposed off site.  In the event that sections of the storm sewer require jetting/cleaning or replacement, remove materials or sections of the original storm sewer system may require offsite disposal if they cannot be consolidated onsite.	Excavated soils would be transported and disposed off-site at an approved facility. Treatment may be performed prior to disposal to render soil a non-TSCA waste.  Water extracted and/or generated from dewatering would be treated on-site and discharged to the river and/or the local POTW.  In the event that sections of the storm sewer require jetting/cleaning or replacement, remove materials or sections of the original storm sewer system may require offsite disposal if they cannot be consolidated onsite.  PRB would function indefinitely and may require periodic replacement of media.
Substantive Permit Requirements	Work in the Riverfront Area and Buffer Zone may require permitting under the Wetlands Protection act and local ordinances.  Work within 25 feet of the River would need to be designed to support the City of New Bedford's planned Riverwalk.  Discharge of groundwater to surface water or to the local POTW would require permitting and/or approvals.  Would require prior DEP approval for addition of Remedial Additives (if any) within 50 feet of the Acushnet River.	Work in the Riverfront Area and Buffer Zone may require permitting under the Wetlands Protection act and local ordinances.  Work within 25 feet of the River would need to be designed to support the City of New Bedford's planned Riverwalk.  Discharge of groundwater to surface water or to the local POTW would require permitting and/or approvals	Work in the Riverfront Area and Buffer Zone may require permitting under the Wetlands Protection act and local ordinances.  Work within 25 feet of the River would need to be designed to support the City of New Bedford's planned Riverwalk.  Discharge of groundwater to surface water or to the local POTW would require permitting and/or approvals  Would require prior DEP approval for addition of Remedial Additives (if any) within 50 feet of the Acushnet River.



	ALTERNATIVE 7	ALTERNATIVE 8	ALTERNATIVE 9
PARAMETER	Removal and On-Site Consolidation of Soils Within 25- feet of Shoreline above Peat and Down to Bedrock Within the Northeast Corner, Engineered Barrier Over Areas with PCBs >100 mg/kg and Asphalt Cap Over Areas with PCBs >2mg/kg, Overburden Groundwater Containment via Vertical Barrier Wall with Hydraulic Containment, In-Situ Treatment of Plume Hot Spot	Removal and On-Site Consolidation of Soils Within 25- feet of Shoreline above Peat and Down to Bedrock Within the Northeast Corner, Engineered Barrier Over Areas with PCBs >100 mg/kg and Asphalt Cap Over Areas with PCBs >2mg/kg, Overburden Groundwater Containment via Vertical Barrier Wall with Hydraulic Containment	Removal and On-Site Consolidation of Soils Within 25- feet of Shoreline above Peat and Down to Bedrock Within the Northeast Corner, Engineered Barrier Over Areas with PCBs >100 mg/kg and Asphalt Cap Over Areas with PCBs >2mg/kg, Partial Containment and Treatment of Groundwater with Permeable Reactive Barrier, In-Situ Treatment of Plume Hot Spot
Size and Configuration	This alternative includes: excavate and provide on-site consolidation of soils within 25-feet of the shoreline down to the top of the peat layer and within the northeast corner of the site down to the top of bedrock, backfill with clean fill, install engineered barrier over areas with PCB concentrations in soil above UCLs in the top 15 feet, restore asphalt cap on rest of site areas where needed, clean and line to the extent practicable or replace sections of storm sewer that serve as a preferential migration pathway, finalize the AUL to restrict current and foreseeable future use and provide for long term operation and maintenance of the engineered barrier and cap, install a vertical containment and groundwater extraction and treatment system to prevent lateral and/or vertical migration of CVOCs and PCBs outside the containment area, and provide in situ treatment of hot spot soils containing concentrations of PCBs and CVOCs that may be acting as a source to overburden groundwater contamination. Both in-situ treatment and groundwater extraction and treatment would reduce concentrations of CVOCs and PCBs within the containment area.  Excavation would be undertaken to the top of the peat (average depth of 9 feet bgs) within 25-feet of the shoreline and to the bedrock surface (average depth of 30 feet bgs) in the northeast corner of OU3. These areas and corresponding depths are also shown on Figure 4-1A. This alternative would include the excavation and on-site consolidation away from the shoreline of approximately 6,900 cubic yards of soil. The consolidation cell would be	soils within 25-feet of the shoreline down to the top of the peat	This alternative includes: excavate and off-site dispose of soils within 25-feet of the shoreline down to the top of the peat layer and within the northeast corner of the site down to the top of bedrock, backfill with clean fill, engineered barrier over areas with PCB concentrations in soil above UCLs in the top 15 feet,, restore asphalt cap on rest of site areas where needed, clean and line to the extent practicable or replace sections of storm sewer that serve as a preferential migration pathway, finalize the AUL to restrict current and foreseeable future use and provide for long term operation and maintenance of the engineered barrier and cap, install a permeable reactive barrier to treat CVOCs and PCBs in overburden groundwater along the downgradient side of the property, with a vertical containment barrier on the northern and southern sides of the impacted area, and in situ treatment of hot spot soils containing concentrations of PCBs and CVOCs that may be acting as a source to overburden groundwater contamination. Excavation would be undertaken to the top of the peat (average depth of 9 feet bgs) within 25-feet of the shoreline and to the bedrock surface (average depth of 30 feet bgs) in the northeast corner of OU3. These areas and corresponding depths are also shown on Figure 4-1A. This alternative would include the excavation and on site consolidation away from the shoreline of approximately 7,900 cubic yards of soil. The consolidation cell would be constructed in the area shown on Figure X-XX. An engineered barrier would be constructed where remaining soils contain PCB concentrations greater than 100 mg/kg (including the consolidation cell), and the asphalt cap would be restored where residual PCB

constructed in the area shown on Figure X-XX. An engineered barrier would be constructed where remaining soils contain PCBs at or greater than 100 mg/kg (including the consolidation cell), and the asphalt cap would be restored where residual PCB concentrations at any depth exceed 2 mg/kg.

Existing storm sewers would be repaired, cleaned and lined wherever practicable, or sections replaced or reconfigured, as needed. The AUL for the Aerovox property would be finalized to restrict foreseeable future site uses and provide for maintenance of the cap and engineered barrier.

Vertical barrier installation would occur along the alignment shown on Figure 4-4B. The type of barrier would be selected from among effective process options including: slurry wall, in situ mixed wall, and sealed sheet piling. Vertical barrier would be installed through the overburden deposits down to bedrock.

Groundwater would be hydraulically contained by pumping (with above ground treatment) from a series of extraction wells within the containment area as shown on Figure 4-5B. A wastewater treatment plant would be constructed on site to manage the water generated by hydraulic containment In situ treatment would be performed by injecting nutrients, organic carbon, microbes, and zero valent iron (Figure 4-6B). A monitoring program would be included to evaluate the success of groundwater treatment within the hydraulically contained area, confirm containment, and provide sentinel monitoring outside the barrier to confirm mitigation of mass flux from the property to the Acushnet River.

Existing storm sewers would be repaired, cleaned and lined wherever practicable, or sections replaced or reconfigured, as needed. The AUL for the Aerovox property would be finalized to restrict foreseeable future site uses and provide for maintenance of the cap and engineered barrier.

Vertical barrier installation would occur along the alignment shown on Figure 4-4B. The type of barrier would be selected from among effective process options including: slurry wall, in situ mixed wall, sealed sheet piling. Vertical barrier would be installed through the overburden deposits down to bedrock.

Groundwater would be hydraulically contained by pumping (with above ground treatment) from a series of extraction wells within the containment area as shown on Figure 4-5B. A wastewater treatment plant would be constructed on site to manage the water generated by hydraulic containment. A monitoring program would be included to confirm containment and provide sentinel monitoring outside the area to confirm mitigation of mass flux from the property to the Acushnet River

concentrations at any depth exceed 2 mg/kg.

Existing storm sewers would be repaired, cleaned and lined wherever practicable, or sections replaced or reconfigured, as needed. The AUL for the Aerovox property would be finalized to restrict foreseeable future site uses and provide for maintenance of the cap and engineered barrier.

A vertical containment barrier would be installed on the northern and southern sides of the impacted area, with a permeable reactive barrier installed within the western edge of the 25-feet of the shoreline to treat CVOCs and PCBs in overburden groundwater along the downgradient side of the property. The two types of barriers would be along the alignment shown on Figure 4-7B). The permeable reactive barrier would be installed though the overburden deposits down to bedrock to treat overburden groundwater. In situ treatment would be performed by injecting nutrients, organic carbon, microbes, and zero valent iron in the area shown on Figure 4-7B. A monitoring program would be included to provide sentinel monitoring outside the barrier and to confirm mitigation of mass flux from the property to the Acushnet River.

#### Remediation Time

Excavation of soils, construction of the consolidation cell, backfilling, and capping (engineered barrier and asphalt) would take approximately four to five months.

Cleaning and lining/replacement of the drainage lines would take approximately one to two months.

Installation of vertical containment barrier, groundwater extraction wells and above ground treatment system, and insitu treatment system would take approximately six to eight months.

Operation of the hydraulic containment and treatment

Excavation of soils, construction of the consolidation cell, backfilling, and capping (engineered barrier and asphalt) would backfilling, and capping (engineered barrier and asphalt) would take approximately four to five months.

Cleaning and lining/replacement of the drainage lines would take approximately one to two months.

Installation of vertical containment barrier, groundwater extraction wells and above ground treatment system would take approximately five to six months.

Operation of the hydraulic containment and treatment system would extend indefinitely (assumed 30 years minimum), or until replacement of media.

Excavation of soils, construction of the consolidation cell, take approximately four to five months.

Cleaning and lining/replacement of the drainage lines would take approximately one to two months.

Installation of containment and permeable reactive barrier and in situ treatment system would take approximately four to five

PRB would function indefinitely and may require periodic

	system would extend indefinitely (assumed 30 years minimum), or until groundwater achieves GW-3 standards and the barrier walls can be removed.	groundwater achieves GW-3 standards and the barrier walls can be removed.	
Spatial Requirements	Remedial activities could be conducted within the confines of the Site.	Remedial activities could be conducted within the confines of the Site.	Remedial activities could be conducted within the confines of the Site.
	A permanent wastewater treatment plant would be constructed and occupy a portion of the property.  A consolidation cell would be constructed and occupy a portion of the property	A permanent wastewater treatment plant would be constructed and occupy a portion of the property.  A consolidation cell would be constructed and occupy a portion of the property	A consolidation cell would be constructed and occupy a portion of the property
Disposal Options	Excavated soil would be consolidated on the Aerovox property with other similar soils for capping (engineered barrier or asphalt).	Excavated soil would be consolidated on the Aerovox property with other similar soils for capping (engineered barrier or asphalt).	Excavated soil would be consolidated on the Aerovox property with other similar soils for capping (engineered barrier or asphalt).
	Water extracted and/or generated from construction dewatering would be treated on-site and discharged to the river and/or the local POTW and groundwater recovered as a result of hydraulic containment would be treated on-site and reinjected or discharged to the river and/or the local POTW.  Waste streams produced by the wastewater treatment plant (e.g. spent activated carbon) would be transported and disposed off site.  In the event that sections of the storm sewer require jetting/cleaning or replacement, remove materials or sections of the original storm sewer system may require offsite disposal if they cannot be consolidated onsite.	Water extracted and/or generated from construction dewatering would be treated on-site and discharged to the river and/or the local POTW and groundwater recovered as a result of hydraulic containment would be treated on-site and reinjected or discharged to the river and/or the local POTW. Waste streams produced by the wastewater treatment plant (e.g. spent activated carbon) would be transported and disposed off site.  In the event that sections of the storm sewer require jetting/cleaning or replacement, remove materials or sections of the original storm sewer system may require offsite disposal if they cannot be consolidated onsite.	Water extracted and/or generated from construction dewatering would be treated on-site and discharged to the river and/or the local POTW.  In the event that sections of the storm sewer require jetting/cleaning or replacement, remove materials or sections of the original storm sewer system may require offsite disposal if they cannot be consolidated onsite.
Substantive Permit Requirements	Work in the Riverfront Area and Buffer Zone may require permitting under the Wetlands Protection act and local ordinances.  Work within 25 feet of the River would need to be designed to support the City of New Bedford's planned Riverwalk.	Work in the Riverfront Area and Buffer Zone may require permitting under the Wetlands Protection act and local ordinances.  Work within 25 feet of the River would need to be designed to support the City of New Bedford's planned Riverwalk.	Work in the Riverfront Area and Buffer Zone may require permitting under the Wetlands Protection act and local ordinances.  Work within 25 feet of the River would need to be designed to support the City of New Bedford's planned Riverwalk.
	Discharge of groundwater to surface water or to the local POTW would require permitting and/or approvals.  Would require prior DEP approval for addition of Remedial Additives (if any) within 50 feet of the Acushnet River.	Discharge of groundwater to surface water or to the local POTW would require permitting and/or approvals	Discharge of groundwater to surface water or to the local POTW would require permitting and/or approvals Would require prior DEP approval for addition of Remedial Additives (if any) within 50 feet of the Acushnet River.



	ALTERNATIVE 10	ALTERNATIVE 11
PARAMETER	Asphalt Cap over Soils With PCB Concentrations > 2 mg/kg and Engineered Barrier Over Soils with Concentrations Above UCLs, Overburden Groundwater Containment via Vertical Barrier Wall with Hydraulic Containment, and In-Situ Treatment of Plume Hot Spot	Asphalt Cap over Soils With PCB Concentrations > 2 mg/kg and Engineered Barrier Over Soils with Concentrations Above UCLs, Overburden Groundwater Containment via Vertical Barrier Wall with Hydraulic Containment
Size and Configuration	This alternative includes: install or maintain the existing pavement asphalt cap over soils with PCB concentrations > 2 mg/kg, install an engineered barrier over areas with PCB concentrations in soil above UCLs in the top 15 feet, clean and line to the extent practicable or replace sections of storm sewer that may serve as a preferential migration pathway, finalize the AUL to restrict current and foreseeable future use and provide for long term operation and maintenance of the cap, install a vertical containment and groundwater extraction and treatment system to prevent lateral and/or vertical migration of CVOCs and PCBs outside the containment area, and provide in situ treatment of soils containing concentrations of PCBs and CVOCs acting as a source to overburden groundwater contamination. Both in-situ treatment and groundwater extraction and treatment would reduce concentrations of CVOCs and PCBs within the containment area.  The asphalt cap with a minimum asphalt thickness of 3 inches would extend over the footprint area shown on Figure 4-3A. In areas where soils within 15 feet of the ground surface are present at concentrations in excess of their respective UCL, the cap shall meet the requirements for an Engineered Barrier as defined in the MCP. Soils excavated for the installation of the Engineered Barrier and vertical barrier wall would be consolidated in other areas of the subsurface under the Site and covered with an appropriate barrier. The anticipated areas to be covered with the Engineered Barrier are also shown on Figure 4-3A. Existing storm sewers would be repaired, cleaned and lined wherever possible, sections replaced or reconfigured, as needed. The AUL for the Aerovox property would be finalized to restrict foreseable future site uses and	This alternative includes: install or maintain the existing pavement asphalt cap over soils with PCB concentrations > 2 mg/kg, install an Engineered Barrier at locations with PCB concentrations in soil above UCLs, clean and line to the extent practicable or replace sections of storm sewer that may serve as a preferential migration pathway, finalize the AUL to restrict current and foreseeable future use and provide for long term operation and maintenance of the cap, install a vertical containment barrier and groundwater extraction and treatment system to prevent lateral and/or vertical migration of CVOCs and PCBs outside the containment area and to reduce concentrations of CVOCs and PCBs within the containment area.  The asphalt cap with a minimum asphalt thickness of 3 inches would extend over the footprint area shown on Figure 4-3A. In areas where soils within 15 feet of the ground surface are present at concentrations in excess of their respective UCL, the cap shall meet the requirements for an Engineered Barrier as defined in the MCP. Soils excavated for the installation of the Engineered Barrier and vertical barrier wall would be consolidated in other areas of the subsurface under the Site and covered with an appropriate barrier. The anticipated areas to be covered with the Engineered Barrier are also shown on Figure 4-3A. Existing storm sewers would be repaired, cleaned and lined wherever possible, sections replaced or reconfigured, as needed. The AUL for the Aerovox property would be finalized to restrict foreseeable future site uses and provide for maintenance of the cap and Engineered Barrier.  Vertical barrier installation would occur along the alignment shown on Figure 4-4B. The
	provide for maintenance of the cap and Engineered Barrier.  Vertical barrier installation would occur along the alignment shown on Figure 4-4B.  The type of barrier would be selected from among effective process options including: slurry wall, in situ mixed wall, and sealed sheet piling. Vertical barrier would be installed through the overburden deposits down to bedrock. Groundwater would be hydraulically contained by pumping (with above ground treatment) from a series of extraction wells within the containment area as shown on Figure 4-5B. A wastewater treatment plant would be constructed on site to manage the water generated by	type of barrier would be selected from among effective process options including: slurry wall, in situ mixed wall, andsealed sheet piling. Vertical barrier would be installed through the overburden deposits down to bedrock. Groundwater would be hydraulically contained by pumping (with above ground treatment) from a series of extraction wells within the containment area as shown on Figure 4-5B. A wastewater treatment plant would be constructed on site to manage the water generated by hydraulic containment. A monitoring program would be included to evaluate the success of groundwater treatment within the hydraulically contained area, confirm containment, and provide sentinel monitoring outside the barrier to confirm mitigation of mass flux from the property to the

	hydraulic containment. In situ treatment would be performed by injecting nutrients, organic carbon, microbes, and zero valent iron (Figure 4-6B). A monitoring program would be included to evaluate the success of groundwater treatment within the hydraulically contained area, confirm containment, and provide sentinel monitoring outside the barrier to confirm mitigation of mass flux from the property to the Acushnet River.	Acushnet River.
Remediation Time	Cap and Engineered Barrier installation would take approximately three to four months. Installation of vertical containment barrier, groundwater extraction wells and above ground treatment system, and in-situ treatment system would take approximately six to eight months.  Operation of the hydraulic containment and treatment system would extend indefinitely (assumed 30 years minimum), or until groundwater achieves GW-3 standards and the barrier walls can be removed.	Cap and Engineered Barrier installation would take approximately three to four months. Installation of vertical containment barrier, groundwater extraction wells and above ground treatment system would take approximately five to six months.  Operation of the hydraulic containment and treatment system would extend indefinitely (assumed 30 years minimum), or until groundwater achieves GW-3 standards and the barrier walls can be removed.
Spatial Requirements	Remedial activities could be conducted within the confines of the Site.  Excavated soils (if any) and debris removed during installation of the vertical barrier may be direct loaded for disposal or securely staged within the Aerovox property as needed.  A permanent wastewater treatment plant would be constructed and occupy a portion of the property.	Remedial activities could be conducted within the confines of the Site.  Excavated soils (if any) and debris removed during installation of the vertical barrier may be direct loaded for disposal or securely staged within the Aerovox property as needed.  A permanent wastewater treatment plant would be constructed and occupy a portion of the property.
Disposal Options	Excavated soils (if any) would either be (a) consolidated on the Aerovox property with other similar soils for subsequent capping or (b) disposed of at an approved facility. In the event that sections of the storm sewer require jetting/cleaning or replacement, removed materials or sections of the original storm sewer system may require offsite disposal if they cannot be consolidated onsite.  Water extracted and/or generated from construction dewatering would be treated onsite and discharged to the river and/or the local POTW and groundwater recovered as a result of hydraulic containment would be treated on-site and reinjected or discharged to the river and/or the local POTW.  Waste streams produced by the wastewater treatment plant (e.g. spent activated carbon) would be transported and disposed off site.	Excavated soils (if any) would either be (a) consolidated on the Aerovox property with other similar soils for subsequent capping or (b) disposed of at an approved facility. In the event that sections of the storm sewer require jetting/cleaning or replacement, remove materials or sections of the original storm sewer system may require offsite disposal if they cannot be consolidated onsite.  Water extracted and/or generated from construction dewatering would be treated on-site and discharged to the river and/or the local POTW, and groundwater recovered as a result of hydraulic containment would be treated on-site and reinjected or discharged to the river and/or the local POTW.  Waste streams produced by the wastewater treatment plant (e.g. spent activated carbon) would be transported and disposed off site.
Substantive Permit Requirements	Work in the Riverfront Area and Buffer Zone may require permitting under the Wetlands Protection act and local ordinances.  Work within 25 feet of the River would need to be designed to support the City of New Bedford's planned Riverwalk.  Discharge of groundwater to surface water or to the local POTW would require permitting and/or approvals.  Would require prior DEP approval for addition of Remedial Additives (if any) within 50	Work in the Riverfront Area and Buffer Zone may require permitting under the Wetlands Protection act and local ordinances.  Work within 25 feet of the River would need to be designed to support the City of New Bedford's planned Riverwalk.  Discharge of groundwater to surface water or to the local POTW would require permitting and/or approvals.  Would require prior DEP approval for addition of Remedial Additives (if any) within 50 feet

feet of the Acushnet River. of the Acushnet River.

#### Notes:

- 1. Timeframes, area and volumes presented in the table are estimates.
- 2. The conceptual plans for Alternatives 1 through 11 are presented as Figures 4-4B through 4-7B.



